

Version with Markings to Show Changes Made in the SpecificationPage 1, last paragraph through page 2, first paragraph:

In recent years, techniques of producing antibodies (polyclonal and monoclonal) have been developed which make it possible to obtain homogeneous, highly specific antibodies. Generally, polyclonal antibodies are used extensively in diagnostics industry. Most commonly they are raised in mammals such as rabbits, mice, rats, horses and goats. This form of antibody production has several disadvantages – large mammals are expensive to maintain, while small mammals yield small quantities of antibody. In addition, there is a requirement for periodic drawing of blood from the animals (~~[Deignan et al.] Deignan, T., et al., Res Vet Sci 69(2) 153-58 (2000)~~). The amount of IgG (antibody) obtained is usually between 3-8 mg/ml of serum. The method also involves bleeding of the rabbit several times to obtain the antibodies, as the titer is highest only between the 8th – 10th day after 2 – 3 boosters. Monoclonal antibodies are produced by immunizing an animal with a protein, obtaining antibody-producing cells from the animal, and fusing the antibody-producing cells with strains of myeloma cells, i.e., tumor cells, to produce hybridomas, which are isolated and cultured as monoclonals. The monoclonal hybridomas may either be cultured in vitro or from the cells, ascitic fluid, or serum of a tumor-bearing host animal. Since each antibody-producing cell generates a single unique antibody, each monoclonal culture of hybridomas produces a homogeneous antibody. Not all of the hybridoma clones, which result from fusing myeloma cells with antibody-producing cells, are specific for the desired pesticide (of for functional groups upon the pesticide characteristic of that class of molecules), since many of the hybridomas will make antibodies, which the inoculated animal has produced to react with other foreign substances. Even antibodies against the subject antigen will differ from clone to clone, since antibodies produced by different cells may react with different antigenic determinants of the same molecule. From each clone, therefore, it is necessary to obtain the resulting antibody and test its reactivity with the subject pesticides and to test its specificity by determining which particular organochlorine pesticide it recognizes. Further, only certain antibodies or antisera function in specific immunoassay formats or configurations.

Page 2, second paragraph:

United States Patent Nos. [4,387,272] 4,357,272 [to] (Polson, A.) and 4,550,019 (Polson, A.)[; and Losen, U] claimed production of hen egg yolk antibodies and [has] have been used in a number of applications for passive transfer of immunity.

Page 3, last paragraph:

Reference is made to the animal studies of Yolken, R. et al., Pediatrics 81(2): 291-295 (1988) and Yolken, R. et al., Journal [Clint.] Clin. Immunology 10(6Suppl): 80S-87S (1990), proposed the oral administration of antiviral HEY immunoglobulin for the prevention and treatment of enteric infections, including rotaviral infection in humans. Methods and formulations for the oral administration of immune globulin are known (U.S. Pat No. 4,477,432 to Hardie). However, there are no reports on the production of egg yolk antibodies for a small molecule such as a pesticide.